Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A device for performing surgery or therapeutic interventions on a patient, comprising:

a first non-invasive curvature sensor configured to be placed externally on a patient, the first non-invasive curvature sensor providing first external curvature data ~~an output readable by a computer~~;

imageable fiducials coupled to the first non-invasive curvature sensor; and

an attachment fixture coupled to the first non-invasive curvature sensor; and

~~wherein the~~ a computer [[is]] configured to receive the ~~computer readable~~ first external curvature data and relate the curvature of the first non-invasive curvature sensor to the location of the imageable fiducials.

Claim 2 (Cancelled)

Claim 3 (currently amended): The device of claim 1, further comprising:

a second non-invasive curvature sensor providing second external curvature data ~~an output readable by the computer~~, the second non-invasive curvature sensor having a first end and a second end and capable of being

coupled to the attachment fixture at the first end; and

a tool connector coupled to the second end of the second non-invasive curvature sensor.

Claim 4 (currently amended): The device of claim 3, further comprising a second attachment fixture capable of being positioned at a known location with respect to the first non-invasive curvature sensor, wherein the second end of the second non-invasive curvature sensor is coupled to the second attachment fixture and the tool connector is coupled to the second non-invasive curvature sensor between the first end and the second end.

Claim 5 (original): The device of claim 3, further comprising a monitor for positionally displaying the tool connector with respect to the patient.

Claim 6 (cancelled)

Claim 7 (original): The device of claim 3, further comprising an optical tracking system electronically coupled to the computer and configured to positionally track the tool connector or a tool positioned in the tool connector.

Claim 8 (currently amended): The device of claim 7, wherein the computer uses both the second non-invasive curvature sensor and the optical tracking system to positionally track the tool connector or a tool positioned in the tool connector.

Claim 9 (currently amended): The device of claim 1, wherein the computer is configured to determine an attachment fixture-centered frame of reference based on the first external curvature data ~~output of the curvature sensor~~.

Claim 10 (currently amended): The device of claim 1, wherein the first non-invasive curvature sensor comprises a fiber optic curvature sensor.

Claim 11 (currently amended): The device of claim 1, wherein the attachment fixture comprises:

at least one imageable fiducial; and

a latching mechanism configured for attaching to the first end of the non-invasive second curvature sensor.

Claim 12 (currently amended): A device for performing surgery or therapeutic intervention on a patient, comprising:

an attachment fixture;

at least one imageable fiducial coupled to the attachment fixture, the imageable fiducial being capable of being detected by a medical imaging system;

a non-invasive curvature sensor having a first end and a second end and capable of being coupled to the attachment fixture at the first end, the non-invasive curvature sensor configured to be placed externally on a patient, the

non-invasive curvature sensor configured to provide external curvature data ~~an output readable by a computer~~; ~~and~~

a tool connector coupled to the second end of the non-invasive curvature sensor; and

~~wherein the~~ a computer [[is]] configured to receive the external curvature data and relate the curvature of the first non-invasive curvature sensor to the location of the imageable fiducials.

Claim 13 (currently amended): A device for use in an image guided therapy or image guided surgery system, comprising:

a non-invasive curvature sensor configured to be applied externally to a portion of a patient, the non-invasive curvature sensor being adapted to measure and provide external curvature data ~~a computer readable output of the curvature the portion of the patient to a computer~~; ~~and~~

imageable fiducials located on the ~~first~~ non-invasive curvature sensor;

an attachment fixture coupled to the non-invasive curvature sensor, the attachment fixture comprising an imageable fiducial; and

~~wherein the~~ a computer [[is]] configured to receive the external curvature data and relate the curvature of the ~~first~~ non-invasive curvature sensor to the location of the imageable fiducials.

Claim 14 (cancelled)

Claim 15 (currently amended): The device for use in an image guided therapy or image guided surgery system according to claim 13, wherein the non-invasive curvature sensor comprises a fiber optic curvature sensor.

Claim 16 (currently amended): A device for generating a patient based frame of reference for an image guided therapy or image guided surgery system, comprising:

a non-invasive curvature sensor configured to be applied externally to a portion of a patient, the non-invasive curvature sensor being adapted to measure and provide external curvature data ~~an output readable by a computer~~ of the curvature of the portion of the patient;

imageable fiducials coupled to the ~~first~~ non-invasive curvature sensor; and

an attachment fixture coupled to the non-invasive curvature sensor at a known position with respect to the non-invasive curvature sensor; and

~~wherein the~~ a computer [[is]] configured to receive the external curvature data and relate the curvature of the ~~first~~ non-invasive curvature sensor to the location of the imageable fiducials.

Claim 17 (currently amended): A device for generating a patient-based frame of reference for an image guided therapy or image guided surgery system according to claim 16, wherein each of the imageable fiducials are coupled to the non-invasive curvature sensor at known inter-fiducial distances.

Claim 18 – 25 (cancelled)

Claim 26 (currently amended): A system for monitoring or enabling surgery on a patient at a distance, comprising:

a first non-invasive curvature sensor configured to be placed externally on the patient, the first non-invasive curvature sensor providing first external curvature data ~~an output readable by a computer~~;

imageable fiducials coupled to the first non-invasive curvature sensor;

an attachment fixture attached to the first non-invasive curvature sensor;

a second non-invasive curvature sensor having a first end and a second end and capable of being coupled at the first end to the attachment fixture, the second non-invasive curvature sensor providing second external curvature data ~~an output readable by a computer~~; ~~and~~

a tool capable of being coupled to the second end of the second non-invasive curvature sensor; and

~~wherein the~~ a computer [[is]] configured to:

receive the first external curvature data;

receive the second external curvature data;

relate the curvature of the first non-invasive curvature sensor to the location of the imageable fiducials;

provide an output of the curvature of the first non-invasive curvature sensor and the position and orientation of the tool coupled to the second end of the second non-invasive curvature sensor with

respect to the attachment fixture; and

communicate the output of the computer to a distant receiver using a communication device that is electronically coupled to the computer.

Claim 27 – 30 (cancelled)

Claim 31 (previously presented): A device for conducting surgery or therapy on a body, comprising:

means for externally measuring the curvature of a body;

means for locating the position of the means for externally measuring the curvature of a body within a frame of reference;

means for determining the position of a tool with respect to the means for externally measuring the curvature of a body; and

means for registering a volumetric image of the body to the means for externally measuring the curvature of a body.